IN THE SPECIFICATION:

Please amend the specification as follows:

Please substitute the paragraph beginning at page 1, line 7, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- The present invention relates to a position detection apparatus and an exposure apparatus and, more particularly, to a detection apparatus for detecting the position of a mark formed on an object placed on a stage, and an exposure apparatus including the apparatus. --

Please substitute the paragraph beginning at page 1, line 20, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- The present invention is also preferably applied to an apparatus for manufacturing semiconductor devices such as ICs or LSIs, image sensing devices such as CCDs, display devices such as liquid crystal panels, or devices such as magnetic heads, and for example, to a proximity exposure apparatus, a projecting exposure apparatus (a so-called stepper), or a scanning exposure apparatus. --

Please substitute the paragraph beginning at page 3, line 26, and ending on page 4, line 6, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- In observing an alignment mark on a wafer, the stage is driven. Especially, since alignment marks of a plurality of shots are observed in global alignment, the stage must be driven a number of times. To improve the throughput, every time the alignment mark in one shot

is sequentially moved to the mark observation position, the stage must be quickly accelerated and stopped. --

Please substitute the paragraph beginning at page 5, line 11, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- According to the first aspect of the present invention, there is provided a position detection apparatus for detecting a position of a mark formed on an object placed on a stage, comprising an image sensing system averaging an image signal obtained by sensing an image of the mark formed on the object, a measurement system obtaining average data of a position deviation of the stage, and an arithmetic section calculating the position of the mark at a state that the stage is at rest on the basis of image data averaged by the image sensing system and a measurement result by the measurement system. --

Please substitute the paragraph beginning at page 12, line 15, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- Fig. 7 is a view schematically showing the relationship between an off-axis scope (OE), a reduction projecting lens (LN), a target stage position, and an actual stage position; --

Please substitute the paragraph beginning at page 12, line 18, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- Fig. 8 is a perspective view schematically showing the arrangement of the principal part of an exposure apparatus with an inspection function according to another preferred embodiment of the present invention; --

Please substitute the paragraph beginning at page 13, line 10, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- Fig. 1 is a perspective view schematically showing the principal part of a projecting exposure apparatus according to the first embodiment of the present invention. Fig. 2 is a block diagram showing the principal part of the projecting exposure apparatus according to the first embodiment of the present invention. Figs. 3 to 5 are flow charts schematically showing the operation of the projecting exposure apparatus shown in Figs. 1 and 2. Fig. 6 is a view schematically showing an alignment mark in one shot on a wafer, which is applied to the projecting exposure apparatus shown in Figs. 1 and 2. Fig. 7 is a view schematically showing the relationship between an off-axis scope (OE), a reduction projecting lens (LN), an actual stage driving position, and a target stage driving position. --

Please substitute the paragraph beginning at page 13, line 24, and ending on page 14, line 11, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- A projecting exposure apparatus (stepper) ST according to the first embodiment of the present invention comprises a reticle holder RH for holding a reticle RT, an off-axis scope OE as an image sensing section for sensing image of alignment marks (to also be simply referred to as marks) WAMX and WAMY on a wafer WF, XY stage XYS and θ stage θs for moving the wafer WF, laser interferometer IFX and mirror MRX for measuring the position or deviation (difference between the target position and actual position) of the XY stage in the X direction, laser interferometer IFY and mirror MRY for measuring the position or deviation of the XY stage in the Y direction, laser interferometer IFθ (mirror MRX is shared) for measuring the rotation amount or deviation of the XY stage, and control unit CU, as shown in Fig. 1. --

Please substitute the paragraph beginning at page 18, line 5, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- A method of detecting a shift amount of the mark position, which is used in step S003 of Fig. 3 (alignment by the global alignment scheme), will be described next with reference to Fig. 2 and the flow charts of Figs. 4 and 5. --

Please substitute the paragraph beginning at page 25, line 13, and ending on page 26, line 1, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- In the above example, the shift amount (position) of a mark measured by the off-axis scope before the stage completely stops is corrected on the basis of the measurement results of average deviations of the stage, which are measured by the laser interferometers in the X and Y directions. However, evaluation need not always be done by this method. The measured mark position may be corrected using the stage deviation except those along the X and Y axes. The stage position may be measured by a measurement instrument of another type. The mode determination section 600 determines the correction mode (e.g., an arithmetic expression to be used for correction) in accordance with setting for devices such as laser interferometers to be used, installation state of the apparatus, floor state, and the like. --

Please substitute the paragraph beginning at page 27, line 10, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- Fig. 8 is a perspective view schematically showing the arrangement of the principal part of an exposure apparatus with an inspection function according to the second embodiment of the present invention. This apparatus has a coater CO, projecting exposure apparatus ST, and developer DE. The coater CO has a function of applying a resist to a wafer WF. The developer DE has a function of developing an inspection wafer exposed by the projecting exposure apparatus ST. Fig. 2 is a block diagram showing the principal part of the projecting exposure apparatus ST. --

Please substitute the paragraph beginning at page 27, line 20, and ending on page 28, line 7, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- In this exposure apparatus with an inspection function, the projecting exposure apparatus ST is automatically inspected while moving an inspection wafer placed at the entrance of the coater CO between the apparatuses CO, ST, and DE in accordance with an instruction from a control unit CU. More specifically, an alignment mark pattern is transferred to the resist on an inspection wafer by exposure using the projecting exposure apparatus ST, and the wafer is developed to form an alignment mark. After this, the position of the mark is measured in the projecting exposure apparatus ST. In this exposure apparatus with an inspection function, the correction mode is determined on the basis of the mark position measurement result (SA110 in Fig. 10). --

Please substitute the paragraph beginning at page 28, line 8, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- Additionally, in this exposure apparatus with an inspection function, for example, the alignment accuracy or process offset value is calculated on the basis of the mark position measurement result. These results are used as correction values for wafer alignment in the projecting exposure apparatus ST. --

Please substitute the paragraph beginning at page 28, line 17, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- The operation of the exposure apparatus with an inspection function according to the second embodiment will be described next with reference to Figs. 8 and 9. Processing shown in Fig. 9 is controlled by the control unit CU. The apparatuses and control unit CU are connected through communication cables. --

Please substitute the paragraph beginning at page 29, line 17, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- When exposure of all shots is ended, the wafer WF is sent from the wafer chuck WS to a loading path R3 of the developer (developing apparatus) DE by a recovery handler HAR (S105). --

Please substitute the paragraph beginning at page 31, line 1, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- Image signals from the CCD camera CMY are processed by the control unit CU to measure the position of the alignment marks WML and WMR in the Y direction. As in the first embodiment, this measurement is executed before the XY stage XYS comes to a complete stop. As measurement results, average shift amounts of the marks during the observation period are obtained. These measurement results are corrected on the basis of the average deviation of the stage XYS during the observation period, which is measured by a laser interferometer, to

calculate the actual shift amounts of the marks. At this time, 3σ associated with a variation in deviation of the stage XYS is also calculated, as in the first embodiment. --

Please substitute the paragraph beginning at page 32, line 2, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- After global alignment is ended, virtual exposure for the wafer WF is executed sequentially from the first shot to the final shot while driving the XY stage XYS by the step and repeat scheme (S110). At this time, light from the exposure light source IL passes through the masking blade MB and reticle RT and enters the projecting lens LN. The image of a pattern formed on the reticle RT is reduced to 1/5 by the projecting lens LN and projected onto the resist applied to the wafer WF. When one shot is exposed, the XY stage XYS moves to execute exposure of the next shot. --

Please substitute the paragraph beginning at page 33, line 6, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- In step SA103, an image sensing control section 300 causes the CCD camera CMY to start storage of the mark image before the stage (XYS and θs) 900 completely stops, i.e., when the stage 900 is still swinging, and to continue this storage until a predetermined observation time elapses. --

Please substitute the paragraph beginning at page 37, line 25, and ending on page 38, line 6, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- In step SAS016, the stage deviation storage section 400 sends a sync signal representing an end of observation to the image sensing control section 300. In step SAS017, the stage deviation storage section 400 calculates average deviations dx and dy of the stage (XYS and θS) 900 in the X and Y directions, and 3σ of the deviations on the basis of the position deviation data stored in the memory 2000, and stores the values in the memory 2000. --

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Please substitute the paragraph beginning at page 39, line 2, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- The shift amount (position) is the average value of shift amounts from the target position of the mark which is moving at a constant speed during the observation period. The average deviation calculated in step SAS007 is the average deviation from the target position of the stage 900 which is moving at a constant speed during the observation period. Hence, when the mark shift amount calculated in step SAS014 is corrected on the basis of the average deviation of the stage 900, which is calculated in step SAS017, the actual shift amount of the mark on the stage 900 from the target position can be calculated.--

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Please substitute the paragraph beginning at page 41, line 17, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.